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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/509,136

09/27/2004

Tomoya Yano

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1992

33448

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02/13/2006

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EXAMINER

KONG, ANDREW D

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 02/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/509,136

Applicant(s)

YANO, TOMOYA

Examiner

Andrew Kong

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-6 is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date Sept 27, 2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Ouchi (U.S. Pat. No. 6,626,540). Ouchi teaches an image display apparatus comprising: an illumination optical system having a light source 201; a plurality of spatial light modulation elements (back of 213) each having reflecting electrodes; polarization elements (front of 213) corresponding to the plural spatial light modulation elements; a color separation/composition element 211 for color-separating illumination light from the illumination optical system into transmission light and reflection light to direct thus generated transmission light and reflection light to the respective spatial light modulation elements via the corresponding polarization elements and for compositing reflection lights from the spatial light modulation elements, the color separation/composition element having reflection planes laid obliquely against the illumination light where the illumination light is color-separated and the reflection lights are composited; a projection optical system 224 for projecting composited light outgoing from the color separation/composition element to display an image of the respective spatial light modulation elements; and a polarization change means 209 for, of the illumination light, causing light of wavelength band which is supposed to pass through the reflection planes of the color separation/composition element to be of P-polarized light toward the reflection planes and causing light of wavelength band which is supposed to be reflected by the reflection planes of the color separation/composition element to be of S-polarized light toward the reflection planes, the polarization change means being disposed on an optical path between the illumination optical system and

the color separation/composition element. The applicant is directed to review figures 24-32.

Alternatively, Ouchi anticipates the claimed invention as follows: Ouchi teaches an image display apparatus comprising: an illumination optical system having a light source 1; a plurality of spatial light modulation elements 107 each having reflecting electrodes; polarization elements 106 corresponding to the plural spatial light modulation elements; a color separation/composition element 105 for color-separating illumination light from the illumination optical system into transmission light and reflection light to direct thus generated transmission light and reflection light to the respective spatial light modulation elements via the corresponding polarization elements and for compositing reflection lights from the spatial light modulation elements, the color separation/composition element having reflection planes laid obliquely against the illumination light where the illumination light is color-separated and the reflection lights are composited; a projection optical system 20 for projecting composited light outgoing from the color separation/composition element to display an image of the respective spatial light modulation elements; and a polarization change means 112 for, of the illumination light, causing light of wavelength band which is supposed to pass through the reflection planes of the color separation/composition element to be of P-polarized light toward the reflection planes and causing light of wavelength band which is supposed to be reflected by the reflection planes of the color separation/composition element to be of S-polarized light toward the reflection planes, the polarization change means being disposed on an optical path between the illumination optical system and

the color separation/composition element. The applicant is directed to review figures 13-15.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ouchi (U.S. Pat. No. 6,626,540) in view of Yi (U.S. Pat. No. 6,678,015). Ouchi teaches the salient features of the claimed invention as discussed above. Ouchi does not explicitly teach that the polarization change means is a retarder stack. Yi teaches that it was known to use a retarder stack as a color selection element. The applicant is directed to review col. 3, lines 33-40. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the retarder stack taught by Yi for the purpose of reducing image loss.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ouchi (U.S. Pat. No. 6,626,540) in view of Sonehara (U.S. Pat. No. 5,073,013)). Ouchi teaches the salient features of the claimed invention as discussed above. Ouchi does not teach adjusting white balance by rotating the polarization elements. Sonehara teaches in claim 4 that it was known to adjust white balance by rotating the polarization elements. It would have been obvious to one of ordinary skill in the art at the time the

invention was made to adjust white balance by rotating the polarization elements as taught by Sonehara for the purpose of improving contrast and for maximizing utilization of light from the light source.

***Allowable Subject Matter***

Claims 4-6 are allowed.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Kong whose telephone number is 517-272-8062. The examiner can normally be reached on Mon - Fri (8am - 5pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2851

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AK  
02/07/2006



CHRISTOPHER MAHONEY  
PRIMARY EXAMINER